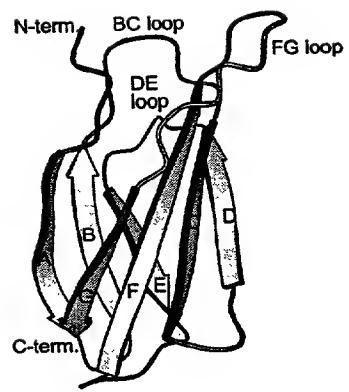
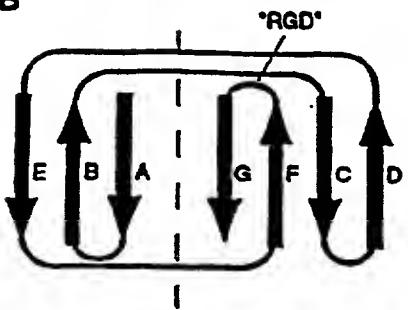


A



B



FIGURES 1A-B

NdeI
 CATATGCAGGGTTCTGATGTTCCCGTGACCTGGAAGTTGGCTGCGACCCCGACTAGC
 MetGlnValSerAspValProArgAspLeuGluValValAlaAlaThrProThrSer
 -2 -1 1 10

BclI PvuII **PstI** **BsiWI**
 CTGCTGATCAGCTGGGATGCTCCTGCAAGTTACCGTGCCTATTACCGTATCACGTACGGT
 LeuLeuIleSerTrpAspAlaProAlaValThrValArgTyrTyrArgIleThrTyrGly
 20 30

EcoRI
 GAAACCGGTGGTAACCTCCCCGGTCAGGAATTCACTGTACCTGGTTCCAAGTCTACTGCT
 GluThrGlyGlyAsnSerProValGinGluPheThrValProGlySerLysSerThrAla
 40 50

SalI **Bst1107I**
 ACCATCAGCGGCCCTGAAACCGGGTGTGACTATAACCACACTGTACGCTGTTACCTGGC
 ThrIleSerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGly
 60 70

SacI **XbaI**
 CGTGGTGACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAACCTACCGTACCTAGTAACTC
 ArgGlyAspSerProAlaSerSerLysProIleSerIleAsnTyrArgThr
 80 90

BamHI
 GAGGATCC

FIGURE 2

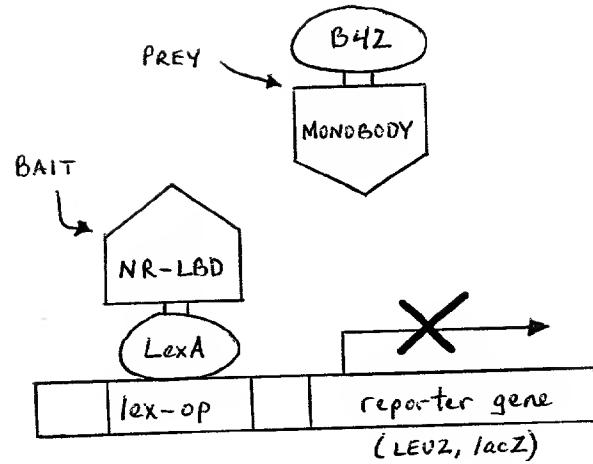
NdeI		PstI		EcoRI
1	11	21	31	41
MQ VSDVPRDLEV	<u>VAATPTSLLI</u>	<u>SWDAPAVTVR</u>	<u>YYRITYGETG</u>	<u>GNSPVQEFTV</u>
A	B	C	D	
SalI				
51	61	71	81	91
PGSKSTATIS	<u>GLKPGVDYTI</u>	<u>TVYAVTGRGD</u>	<u>SPASSKPISI</u>	<u>NYRT</u>
E	F	G		
SacI				
XbaI				

Figure 3A

NdeI		PstI		EcoRI
1	11	21	31	41
MQ VSDVPRXLEV	<u>VAATPTSLLI</u>	<u>SWDAPAVTVR</u>	<u>YYRITYGETG</u>	<u>GNSPVQEFTV</u>
A	B	C	D	
SalI				
51	61	71	81	91
PGSKSTATIS	<u>GLKPGVDYTI</u>	<u>TVYAVTGRGD</u>	<u>SPASSKPISI</u>	<u>NYRT</u>
E	F	G		
SacI				
XbaI				

Figure 3B

NO INTERACTION

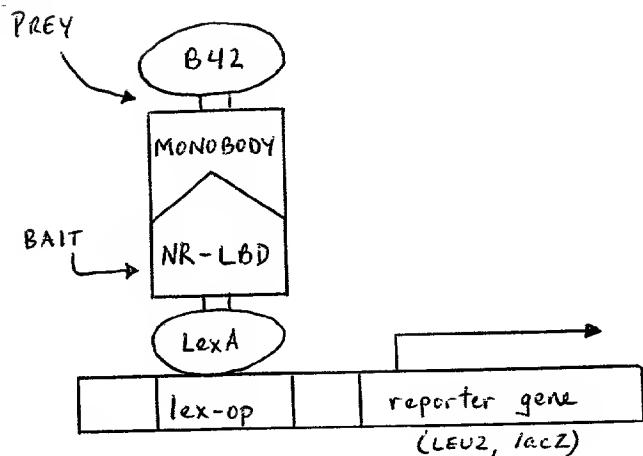


PHENOTYPE

- NO GROWTH IN -LEU MEDIA
- NO β -GALACTOSIDASE ACTIVITY

FIGURE 4A

POSITIVE INTERACTION



PHENOTYPE

- GROWTH IN -LEU/+GALACTOSE MEDIA
- β -GALACTOSIDASE ACTIVITY
- NO GROWTH IN -LEU/-GALACTOSE MEDIA

FIGURE 4B

ATGGACTACAAGGACGACGATGACAAGGGTATGCAGGTTCTGATGTTCCGACCGACCTG
MetAspTyrLysAspAspAspAspLysGlyMetGlnValSerAspValProThrAspLeu

PvuII

GAAGTTGTTGCTGCGACCCCGACTAGCCTGCTGATCAGCTGGGATGCTCCTNNKNNKNNK
GluValValAlaAlaThrProThrSerLeuLeuIleSerTrpAspAlaProXaaXaaXaa

EcoRI

NNKNNKTATTACCGTATCACGTACGGTGAAACCGGTGGTAACCTCCCAGGTTCAAGAATTC
XaaXaaTyrTyrArgIleThrTyrGlyGluThrGlyGlyAsnSerProValGlnGluPhe

SalI

ACTGTACCTGGTTCCAAGTCTACTGCTACCACAGCGGCCTGAAACCGGGTGTGACTATC
ThrValProGlySerLysSerThrAlaThrIleSerGlyLeuLysProGlyValAspTyr

ACCATCACTGTATAACGCTGTTACTGGCNNNNNNNNNNNNNNKNTCCAAGCCAATC
ThrIleThrValTyrAlaValThrGlyXaaXaaXaaXaaXaaXaaSerLysProIle

KpnI

TCGATTAACCTACCGTACCAAGTGGTACCGGTGGTCCCTCCAAAAAGAAGAGAAAGGTA
SerIleAsnTyrArgThrSerGlyThrGlyGlySerProProLysLysArgLysVal

GCTGGTATCAATAAGATATCGAGGAGTGCAATGCCATCATTGAGCAGTTATCGACTAC
AlaGlyIleAsnLysAspIleGluGluCysAsnAlaIleIleGluGlnPheIleAspTyr

CTGCGCACCGGACAGGAGATGCCATGGAAATGGCGATCAGCGATTAACTGGTGGGCCG
LeuArgThrGlyGlnGluMetProMetGluMetAlaAspGlnAlaIleAsnValValPro

GGCATGACGCCGAAACCATTCTCACGCCGGCCCGATCCAGCCTGACTGGCTGAAA
GlyMetThrProLysThrIleLeuHisAlaGlyProProIleGlnProAspTrpLeuLys

TCGAATGGTTTCATGAAATTGAAGCGGATGTTAACGATACCAGCCTCTGCTGAGTGGAA
SerAsnGlyPheHisGluIleGluAlaAspValAsnAspThrSerLeuLeuSerGly

XbaI SphI

GATTAACCTCGAGGCATGC
Asp***

FIGURE 5

ATGGGTAAGCCTATCCCTAACCTCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAAGATATCGAGGAGTGCAATGCC
ProProLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCAITGAGCAGTTATCGACTACCTGCGCACCGGACAGGAGATGCCGATGGAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACGTGGTGCAGGGCATGACGCCGAAAACCATTCTTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTCATGAAATTGAACGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn
KpnI
HindIII SacI
GATACCAGCCTTGCTGAGTGGAGATGCCCTCCAAGCTGGTACCGAGCTGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTCTGATGTTCCGACCGACCTGGAAGTTGCTGCGACCCGNNSNNSNNSNN
GlnValSerAspValProThrAspLeuGluValAlaAlaThrProXaaXaaXaaXaa

PvuII PstI
NNSNNSNNSACTAGCCTGCTGATCAGCTGGATGCTCTGCAGTTACCGTGCCTTATTAC
XaaXaaXaaThrSerLeuLeuIleSerTrpAspAlaProAlaValThrValArgTyrTyr

EcoRI
CGTATCACGTACGGTAAACCGGTGGTAACCTCCCGGTTAGGAATTCACTGTACCTGGT
ArgIleThrTyrGlyGluThrGlyGlyAsnSerProValGlnGluPheThrValProGly

SalI
TCCAAGTCTACTGCTACCATCAGCGGCCTGAAACCGGGTGTGACTATACCATCACTGTA
SerLysSerThrAlaThrIleSerGlyLeuLysProGlyValAspTyrThrIleThrVal

SacI
TACGCTGTTACTGGCCGTGGTACAGCCCAGCGAGCTCCAAGCCAATCTCGATTAAC
TyrAlaValThrGlyArgGlyAspSerProAlaSerSerProIleSerIleAsnTyr

XbaI SphI
CGTACCTAGTAACCTCGAGGCATGC
ArgThr*****

FIGURE 6

ATGGGTAAGCCTATCCCTAACCTCTCGGTCTGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTATCGACTACCTGCGCACGGACAGGAGATGCCGATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACGTGGTGCAGGGCATGACGCCGAAAACCATTCTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn
KpnI
HindIII SacI
GATACCAGCCTTTGCTGAGTGGAGATGCCTCCAAGCTGGTACCGAGCTGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCCGACTAGCCTGCTG
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProThrSerLeuLeu

PvuII
ATCAGCTGGATGCTCCTNNKNNKNNKNNKTATTACCGTATCACGTACGGTGAAACC
IleSerTrpAspAlaProXaaXaaXaaXaaTyrTyrArgIleThrTyrGlyGluThr

EcoRI
GGTGGTAACCCCCGGTCAGGAATTCACTGTACCTGGTCCAAGTCTACTGCTACCATC
GlyGlyAsnSerProValGlnGluPheThrValProGlySerLysSerThrAlaThrIle

SalI
AGCGGCCTGAAACCGGGTGTGACTATACCATCACTGTATACGCTGTTACTGGC**NNKNNK**
SerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGlyXaaXaa

XbaI SphI
NNKNNKNNKNNKNNKTCCAAGCCAATCTGATTAACTACCGTACCTAGTAACCGAGGCA
XaaXaaXaaXaaSerLysProIleSerIleAsnTyrArgThr.....

TGCATCTAGAGGGCCGCATCATGTAATTAGTTATGTCACGCTTA

FIGURE 7

ATGGGTAAACCTATCCCTAACCTCTCGTCTGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTTGAGCAGTTATCGACTACCTGCGCACCGAACAGGAGATGCCATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlnGluMetProMetGluMetAla

GATCAGGGGATTAACTGGTGCAGGGCATGACGCCGAAAACCATTCTCACGCCGGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn
KpnI
HindIII SacI
GATACCAAGCCTTGTGAGTGGAGATGCCCTCAAAGCTGGTACCGAGCTGGATCTATG
AspThrSerLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CGTGTTCCTGATGTTCCGGTGAACCTGGAAGTTGTTGCTGCGACCCGACTAGCCTGCTG
ArgValSerAspValProArgAspLeuGluValAlaAlaThrProThrSerLeuLeu

PvuII
ATCAGCTGGGATGCTCCTGCAGTTACCGTGCCTTATTACCGTATACGTACGGTAAAC
IleSerTrpAspAlaProAlaValThrValArgTyrTyrArgIleThrTyrGluThr

ECORI
GGTGGTAACTCCCCGGTTCAGGAATTCACTGTACCTGGTCCAAGTCTACTGCTACCATC
GlyGlyAsnSerProValGlnGluPheThrValProGlySerSerThrAlaThrIle

Sall
AGCGGCCTGAAACCGGGTGTGACTATACCATCACTGTATACGCTGTTACTGGC~~NNKNNK~~
SerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGlyXaaXaa

~~NNKNNKNNKNNKNNKNNKNNKNNKNNKNNKNNKNNKNNKAAGCCAATCTGATTAAC~~
XaaXaaXaaXaaXaaXaaXaaXaaXaaXaaXaaXaaXaaXaaLysProIleSerIleAsn

XhoI SphI
TACCGTACCTAGTAAC~~T~~CGAGGCATGC
TyrArgThr*****

FIGURE 8

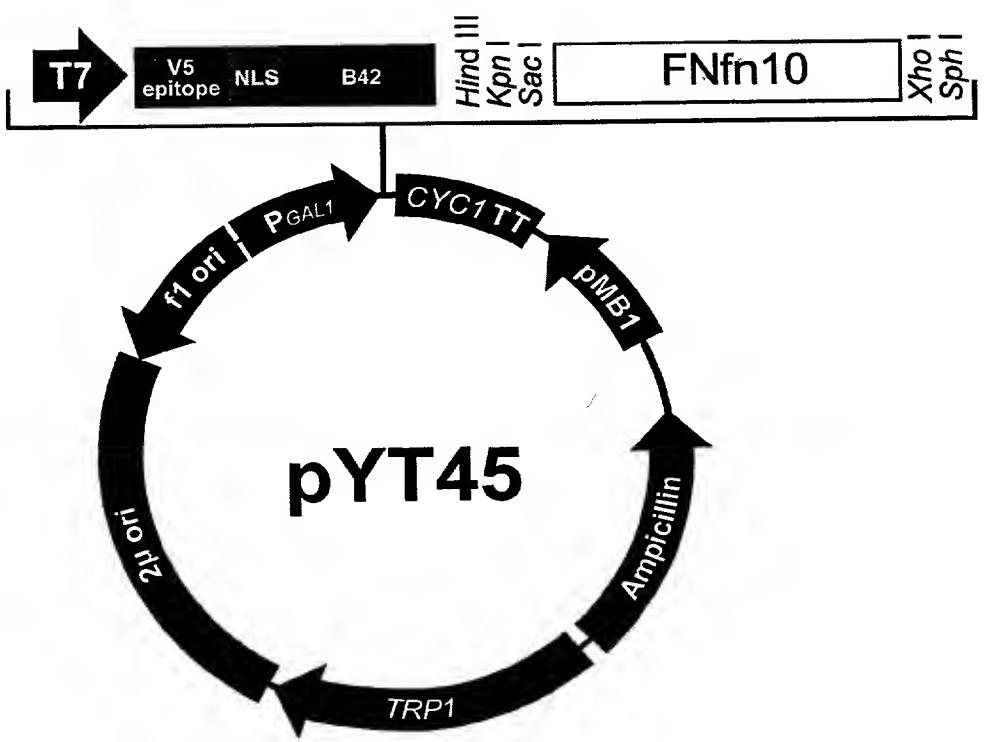


FIGURE 9

ATGGGTAAGCCTATCCCTAACCCTCTCCTCGGTCTCGATTCTACACAAGCTATGGGTGCT
MetGlyLysProIleProAsnProLeuLeuGlyLeuAspSerThrGlnAlaMetGlyAla

CCTCCAAAAAAGAAGAGAAAGGTAGCTGGTATCAATAAGATATCGAGGAGTGCAATGCC
ProProLysLysLysArgLysValAlaGlyIleAsnLysAspIleGluGluCysAsnAla

ATCATTGAGCAGTTATCGACTACCTGCGCACCGGACAGGAGATGCCATGGAAATGGCG
IleIleGluGlnPheIleAspTyrLeuArgThrGlyGlnGluMetProMetGluMetAla

GATCAGGCGATTAACGTGGTGCAGGCATGACGCCGAAAACCATTCTCACGCCGGCCG
AspGlnAlaIleAsnValValProGlyMetThrProLysThrIleLeuHisAlaGlyPro

CCGATCCAGCCTGACTGGCTGAAATCGAATGGTTTCATGAAATTGAAGCGGATGTTAAC
ProIleGlnProAspTrpLeuLysSerAsnGlyPheHisGluIleGluAlaAspValAsn

HindIII/KpnI/SacI
GATACCAGCCTTGCTGAGTGGAGATGCCTCCAAGCTGGTACCGAGCTGGATCTATG
AspThrSerLeuLeuLeuSerGlyAspAlaSerLysLeuGlyThrGluLeuGlySerMet

CAGGTTCTGATGTTCCGACCGACCTGGAAGTTGTTGCTGCGACCCGACTAGCCTGCTG
GlnValSerAspValProThrAspLeuGluValValAlaAlaThrProThrSerLeuLeu

PvuII PstI
ATCAGCTGGGATGCTCCTGCAGTTACCGTGCCTTATTACCGTATCACGTACGGTGAAACC
IleSerTrpAspAlaProAlaValThrValArgTyrTyrArgIleThrTyrGlyGluThr

EcoRI
GGTGGTAACCCCCGGTTCAGGAATTCACTGTACCTGGTCCAAGTCTACTGCTACCATC
GlyGlyAsnSerProValGlnGluPheThrValProGlySerSerThrAlaThrIle

SalI
AGCGGCCCTGAAACCGGGTGTGACTATACCATCACTGTATACGCTGTTACTGGCCGTGGT
SerGlyLeuLysProGlyValAspTyrThrIleThrValTyrAlaValThrGlyArgGly

SacI XhoI SphI
GACAGCCCAGCGAGCTCCAAGCCAATCTGATTAACCTACCGTACCTAGTAACTCGAGGCA
AspSerProAlaSerSerLysProIleSerIleAsnTyrArgThr*****

TGC

FIGURE 10

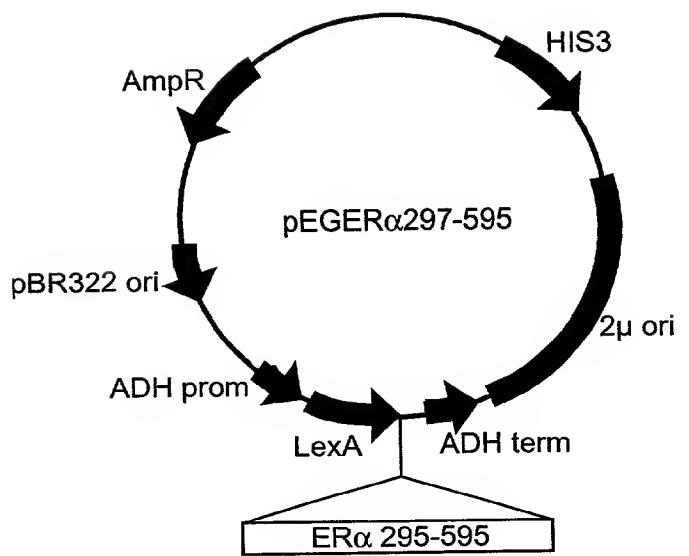


FIGURE 11

ATGAAAGCGTTAACGGCCAGGCAACAAGAGGTGTTGATCTCATCCGTGATCACATCAGC
MetLysAlaLeuThrAlaArgGlnGlnGluValPheAspLeuIleArgAspHisIleSer

CAGACAGGTATGCCGCCACGCGTGCAGGAAATCGCGCAGCGTTGGGGTTCCGTTCCCCA
GlnThrGlyMetProProThrArgAlaGluIleAlaGlnArgLeuGlyPheArgSerPro

AACCGGGCTGAAGAACATCTGAAGGCGCTGGCACGCAAAGGCATTGAAATTGTTCC
AsnAlaAlaGluGluHisLeuLysAlaLeuAlaArgLysGlyValIleGluIleValSer

GGCGCATCACCGGGATTCGCTGTTGCAGGAAGAGGAAGAAGGGTTGCCGCTGGTAGGT
GlyAlaSerArgGlyIleArgLeuLeuGlnGluGluGlyLeuProLeuValGly

cgtgtggctgccggtaaccacttctggcgcaacagcatattgaaggcattatcaggc
ArgValAlaAlaGlyGluProLeuLeuAlaGlnGlnHisIleGluGlyHisTyrGlnVal

GATCCTTCCTTATTCAAGCCGAATGCTGATTCCTGCTGCGCGTCAGCGGGATGTCGATG
AspProSerLeuPheLysProAsnAlaAspPheLeuLeuArgValSerGlyMetSerMet

AAAGATATCGGCATTATGGATGGTGAATTGCTGGCAGTGCATAAAACTCAGGATGTACGT
LysAspIleGlyIleMetAspGlyAspLeuLeuAlaValHisLysThrGlnAspValArg

AACGGTCAGGTCGTTGTCGACGTATTGATGACGAAGTTACCGTTAACGCCCTGAAAAAA
AsnGlyGlnValValValAlaArgIleAspAspGluValThrValLysArgLeuLysLys

CAGGGCAATAAGTCGAACTGTTGCCAGAAAATAGCGAGTTAACCAATTGTCGTAGAT
GlnGlyAsnLysValGluLeuLeuProGluAsnSerGluPheLysProIleValValAsp

CTTCGTCAGCAGAGCTTACCATTAAGGGCTGGCGGTTGGGGTTATTGCAACGGCGAC
LeuArgGlnGlnSerPheThrIleGluGlyLeuAlaValGlyValIleArgAsnGlyAsp
SacI

EcoRI HindIII
TGGCTGGAATTCAAGCTTGAGCTGGCGGCAGCGGTATGATCAAACGCTCTAAGAAGAAC
TrpLeuGluPheLysLeuGluLeuGlyGlySerGlyMetIleLysArgSerLysLysAsn

AGCCTGGCCTGTCCTGACGGCCGACCAGATGGTCAGTGCCCTGTTGGATGCTGAGCCC
SerLeuAlaLeuSerLeuThrAlaAspGlnMetValSerAlaLeuLeuAspAlaGluPro

HindIII
CCCATACTCTATTCCGAGTATGATCCTACCAGACCCTTCAGTGAAGCTTCGATGATGGGC
ProIleLeuTyrSerGluTyrAspProThrArgProPheSerGluAlaSerMetMetGly

FIGURE 12A

TTACTGACCAACCTGGCAGACAGGGAGCTGGTCACATGATCAACTGGCGAAGAGGGTG
LeuLeuThrAsnLeuAlaAspArgGluLeuValHisMetIleAsnTrpAlaLysArgVal

XbaI

CCAGGCTTGATGGATTGACCCCTCCATGATCAGGTCCACCTTCTAGAACATGTGCCTGGCTA
ProGlyPheValAspLeuThrLeuHisAspGlnValHisLeuLeuGluCysAlaTrpLeu

GAGATCCTGATGATTGGCTCGTCTGGCGCTCCATGGAGCACCCAGTGAAGCTACTGTTT
GluIleLeuMetIleGlyLeuValTrpArgSerMetGluHisProValLysLeuLeuPhe

GCTCTAACTGCTCTGGACAGGAACCAGGGAAAATGTGTAGAGGGCATGGTGGAGATC
AlaProAsnLeuLeuLeuAspArgAsnGlnGlyLysCysValGluGlyMetValGluIle

PstI

TTCGACATGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAGAGGAG
PheAspMetLeuLeuAlaThrSerSerArgPheArgMetMetAsnLeuGlnGlyGluGlu

TTTGTGTGCCTCAAATCTATTATTGGCTTAATTCTGGAGTGTACACATTCTGTCCAGC
PheValCysLeuLysSerIleIleLeuLeuAsnSerGlyValTyrThrPheLeuSerSer

ACCCCTGAAGTCTCTGGAAGAGAAGGACCATATCCACCGAGTCCTGGACAAGATCACAGAC
ThrLeuLysSerLeuGluLysAspHisIleHisArgValLeuAspLysIleThrAsp

PstI

ACTTTGATCCACCTGATGGCCAAGGCAGGCCCTGACCCCTGCAGCAGCAGCACCAGCGGCTG
ThrLeuIleHisLeuMetAlaLysAlaGlyLeuThrLeuGlnGlnHisGlnArgLeu

GCCCAGCTCCTCATCCTCTCCCACATCAGGCACATGAGTAACAAAGGCATGGAGCAT
AlaGlnLeuLeuLeuIleLeuSerHisIleArgHisMetSerAsnLysGlyMetGluHis

CTGTACAGCATGAAGTGCAAGAACGTGGTCCCCCTATGACCTGCTGGAGATGCTG
LeuTyrSerMetLysCysLysAsnValValProLeuTyrAspLeuLeuGluMetLeu

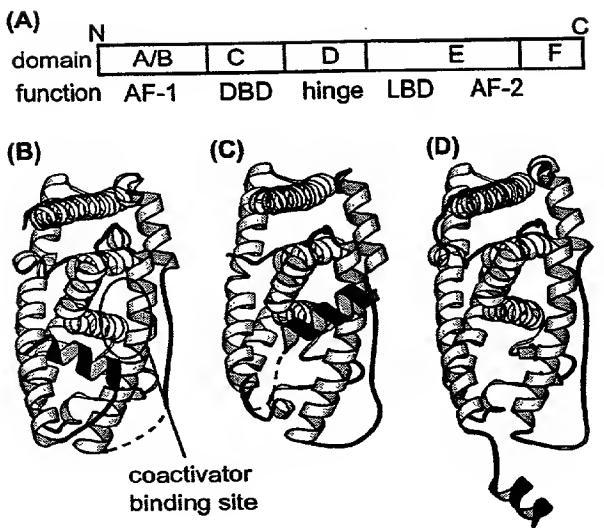
GACGCCACCGCCTACATGCGCCACTAGCCGTGGAGGGGCATCCGTGGAGGAGACGGAC
AspAlaHisArgLeuHisAlaProThrSerArgGlyGlyAlaSerValGluGluThrAsp

CAAAGCCACTGGCCACTGCGGGCTCTACTCATCGCATTCTGCAAAAGTATTACATC
GlnSerHisLeuAlaThrAlaGlySerThrSerSerHisSerLeuGlnLysTyrTyrIle

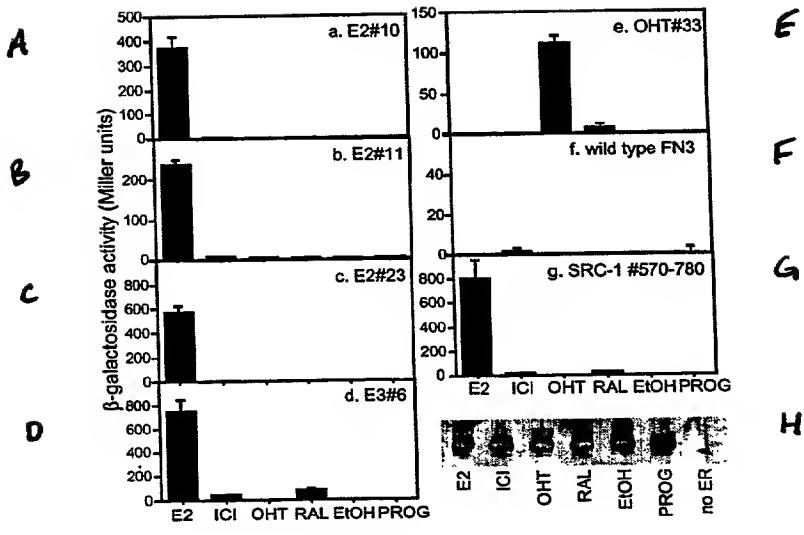
XhoI

ACGGGGGAGGCAGAGGGTTCCCTGCCACAGTCTGACTcgag
ThrGlyGluAlaGluGlyPheProAlaThrVal***

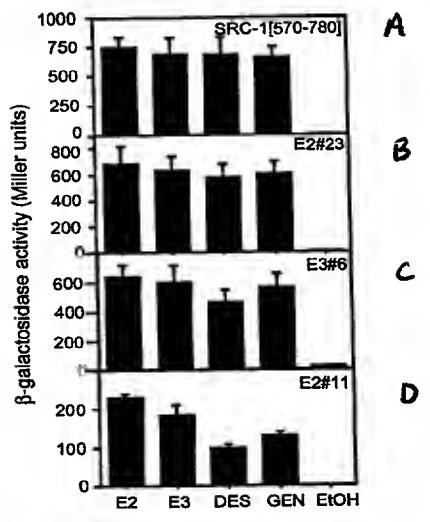
FIGURE 12B



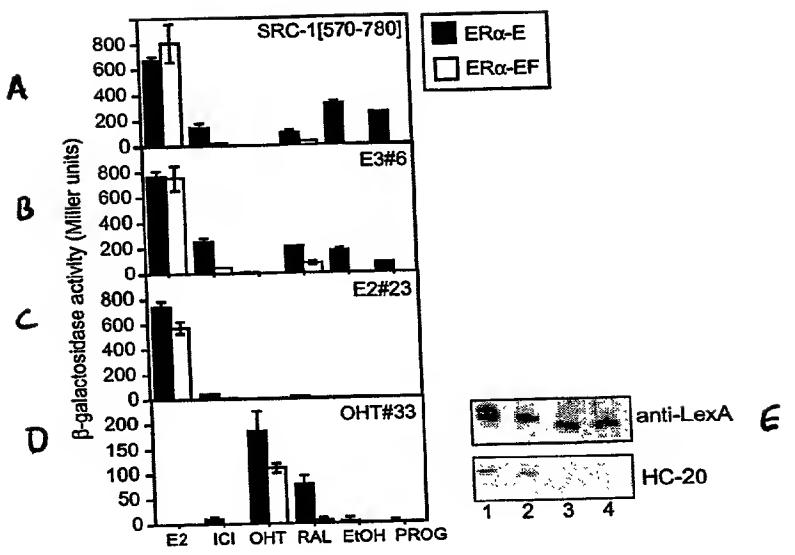
FIGURES 13A-D



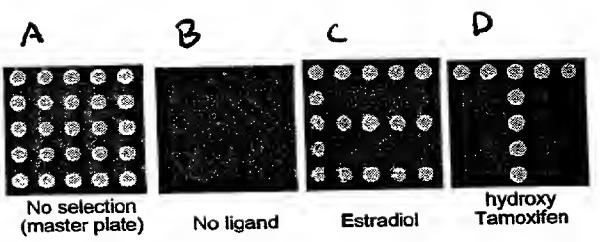
FIGURES 14 A-H



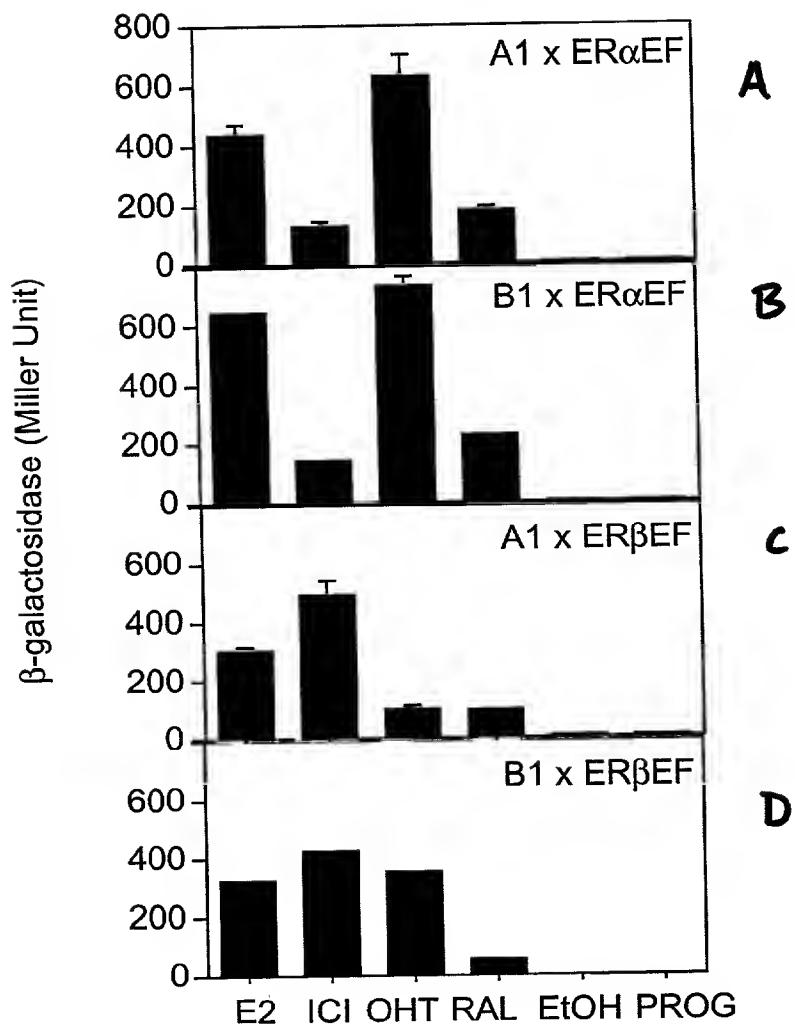
FIGURES 15A-D



FIGURES 16A - E



FIGURES 17A-D



FIGURES 1B A-D